

Amendments to the Specification:

Please replace paragraphs [0004] - [0006], [0025], [0034], [0035], and [0047] with the following amended paragraphs:

[0004] In other instances, intervertebral disc arthroplasty devices have been proposed for preventing the collapse of the intervertebral space between adjacent vertebrae while maintaining a certain range of pivotal and/or rotational motion therebetween. Such devices typically include articular elements positioned between upper and lower plates, which are further attached to respective superior and inferior vertebrae. The articular elements are typically configured to allow the vertebrae to pivot and/or rotate relative to one another. These motion-preserving devices, however, can result in damage from un-constrained movement. Such movement, or lack of stabilization, can exacerbate disc replacement recovery for patients who have spinal deformities such as ~~lordosis~~ scoliosis or spondylolisthesis.

[0005] In one embodiment, a motion-preserving implant device for insertion between two bones, such as but not limited to vertebrae, is provided. The motion-preserving implant includes a first plate for engaging with a first bone and a second plate for engaging with a second bone. An articulation member is positioned between the two plates and a motion-controlling member attached to one or both of the plates or is positioned between both plates. In some embodiments, the motion-controlling member is configured to constrain, dampen, and/or bumper the relative motion between the two plates.

[0006] In another embodiment, a spinal implant for insertion between two vertebral bodies is provided. The spinal implant includes a first plate for engaging with the first vertebral body and a second plate for engaging with the second vertebral body. The spinal implant also includes an articulation member positioned between the two plates and an elastic motion-controlling member attached to one or both of the plates or positioned between the plates. In some embodiments, the articulation member and the motion-controlling member are configured to provide pivotal and rotational movement between the two vertebral bodies. Also in some

embodiments, the articulation member is configured to provide rotational and translational movement between the two vertebral bodies.

[0025] Referring to the embodiments of Figs. 3a-4, both of the plates 22, 24 include a plurality of recesses 62, 64 for receiving one or more elastic members 66 connected by a cord 68. It is understood that the elastic members 66 and/or the cord 68 may be comprised of many different materials, including but not limited to a rubber polymer, resilient metal, or plastic. A coating, such as an ultra-high molecular weight polyethylene (UHMWP), can also be added to an outer surface of the elastic members 66 and/or the cord 68. Furthermore, some or all of the elastic members 66 and/or the cord 68 can be constructed of a bio-resorbable material so that ~~there~~ their properties may change over time. Alternatively or in addition, some or all of the elastic members 66 and/or the cord 68 can be constructed of a material that changes properties in response to its environment, such as memory-shape metal. In yet another embodiment, some or all of the elastic members 66 and/or the cord 68 can be made of a material that changes properties in response to an external stimulus, such as a radio-frequency signal. For example, the device 20 may require additional cushioning or constraint during a period in which a spondylolisthesis condition is first addressed, but as the spondylolisthesis resolves, the cushioning or constraint can be reduced or removed. In addition, the cord 68 can be used to facilitate the assembly and placement of the members 66 inside the device 20, as well as maintaining the placement during insertion. It is understood that in other embodiments, the cord 68 may not be used. Also, as shown in presently incorporated U.S. Patent Publication No. 2002/0035400 but not shown in the present figures, a sheath can be used to enclose some or all of the area between the two plates 22, 24, including the resilient members 66.

[0034] Referring specifically to Fig. 14, in other embodiments, the elastic members 116 are of a length that they do not “normally” reach their corresponding recess. In some embodiments, such as is illustrated in Fig. 14, there may not even be a corresponding recess in the plate 24 (as compared to the recesses 114 of Fig. 12). In these embodiments, the plates 22, 24 are unrestrained in a “normal” position. A normal position can be one in which the plates 22, 24 are a desired position, such as substantially parallel. ~~In cases such as lordosis, a~~ A normal

position can be out of parallel to allow for the offset nature of the lordotic vertebrae. The position is no longer “normal” when there is substantial movement or flexation of the spine. The elastic members 116 do not affect any rotational movement about the axis R, but provide bumpers between the plates 22, 24 for other movement.

[0035] Referring specifically to Fig. 15, in other embodiments, the elastic members 116 can also be of different sizes or shapes to provide different cushioning effects. For example, a relatively long elastic member 116c can be used with a relatively short elastic member 116d. This example can be used in cases ~~such as lordosis~~ of deformity, or can be used to define a relatively normal angulation in the spine. Although a cushioning arrangement is shown, bumper type arrangements can also benefit from these different sized elastic members 116c, 116d.

[0047] The method 300 begins at step 302 where a particular implant device is selected. At step 304, an elastic member is chosen. As discussed above, there are a wide assortment of elastic members for performing cushioning, dampening, and/or constraint. At step 306, a size of each elastic member is chosen. In some of the above-described examples, deformities such as ~~lordosis~~ scoliosis or spondylolisthesis can present patient-specific shapes for the implant device. Also, general curvature of the spine presents different shaped openings, depending on the disc location being addressed.